



UNIVERSITY OF  
CALGARY

# Engineering 3+2 Science 2+2 & 3+2

Earn one bachelor's degree from home  
university and another bachelor's degree  
or master's degree in Canada

**International Collaborative Programs**

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# Your future is bright

The **University of Calgary** is a community of 30,000+ exceptional students like you, who come from all over the world to learn and grow. Our outstanding academic environment, world-class facilities and extensive student services will help you grow and succeed academically and personally.

**Your place to thrive.** Located on 526 park-like acres, our main campus is minutes from downtown Calgary and just an hour's drive away from the Rocky Mountains. Calgary is a welcoming, safe and diverse city you will love.

## UCalgary is...

Within the **Top 200**  
universities worldwide  
(Academic Ranking of  
World Universities,  
2019 Shanghai Rankings)

**#6** research-intensive  
university in Canada  
(2017 ReSearch Infosource Rankings)

**A top university**  
in Canada and in the world

Within the **Top 140** in  
the 2019 QS Graduate  
Employability Rankings

Canadian universities  
are among **the  
best** in the  
**world**

Calgary is the  
**sunniest city**  
in Canada — **333+**  
days a year

Canadian **tuition fees** and **living  
costs** are **lower than** in the **US,  
UK** and **Australia**

Calgary is the  
**#5 most liveable  
city** in the **world**



# Earn a second degree

## Maximize your potential in Canada's energy and engineering capital

“Studying at one of Canada's best universities enables you to learn beside world-class faculty and researchers, enjoy specialized programs, practical training and top-quality research facilities. You gain international exposure while you immerse yourself in our talented international student community.

Through the 2+2 and 3+2 Science and Engineering programs, you study the first two or three years in your home country and the last two years here. You earn a second degree from a leading Canadian university in just two years, experience life in Canada and learn to become more competitive in the international job market. It's a unique experience that will transform your life. I warmly invite you to join us.”


— Dr. Janaka Ruwanpura, Vice-Provost (International)

“We offer students innovative programs, hands-on research opportunities, access to cutting-edge laboratories, and a stimulating environment to fuel their curiosity. Studying with us will give you a world-class learning experience.”

— Dr. Lesley Rigg, Dean, Faculty of Science

“We offer extensive student supports, a diverse and welcoming community, new facilities and courses taught by research leaders dedicated to helping students succeed. Join us!”

— Dr. Bill Rosehart, Dean, Schulich School of Engineering



**14** faculties, **250+**  
programs,  
**180,000** alumni  
in **150+** countries

**#196** in the world  
and #7 in Canada  
Center for World University  
Rankings (CWUR), 2019

## Top 250

most globally oriented  
universities in the world.  
Times Higher Education Ranking, 2020

# Canada's top six research- intensive university

“Studying here is not only a language development process, but also an improvement of my academic skills. I chose the University of Calgary because of its leadership in oil and gas and the opportunity to develop a solid understanding of geophysics and find my true research interests. I got high marks, made the Dean’s list and received a scholarship, which was inspiring and helpful.”

— Jingchuan W., 2+2 Science, Geophysics, from  
China University of Petroleum East China

“Learning at Schulich isn’t just classroom-based. It extends to enhancing student understanding through various extra-curricular activities and hands-on lab work. It’s a challenging but very rewarding experience to be able to watch myself grow as a future engineer and as a person.”

— Samara M., student, Schulich School of Engineering.

# World-class research

Experiential learning at the Faculty of Science and Schulich School of Engineering



**Leading-edge research:** new distance record set as researchers teleport particle of **light** six kilometres



The new, **\$174-million Canadian Natural Resources Limited Engineering Complex** offers state-of-the-art labs, classrooms and learning space to engineering students



**Energy excellence:** Canadian government awards UCalgary **\$75 million** for a **Global Research Initiative in Sustainable Low Carbon Unconventional Resources**

Learn alongside some of the **most creative** and **interdisciplinary** civil and chemical engineering researchers in Canada. Schulich's **civil and chemical engineering programs** are among the **top 10** in **Canada**.

(2018 QS World Rankings)

UCalgary is **home** to **international leaders** and **researchers** in space science, geomatics, communications and satellite systems, involved in 20+ space missions.



**Championing entrepreneurship:** the launch of the **Hunter Hub** for **Entrepreneurial Thinking** and of the Creative Destruction Lab — Rockies

**\$380.4 million** in **sponsored research funding** in 2016-2017





## Top Canadian university

Canada's top six research-intensive university

## Learn from the best

Learn alongside world reputed faculty and researchers

## Become competitive in the job market

Study abroad makes you more competitive in the international job market

## Earn two degrees

Earn two bachelor's degrees (2+2) or one bachelor's degree and one master's degree (3+2)

## Value for money

You study two years internationally instead of four (2+2)

## Student services to help you succeed

Learn more at [ucalgary.ca/iss](http://ucalgary.ca/iss)

## Live in one of Canada's greatest cities

Calgary is the #5 most liveable city in the world (2019 Global Liveability Ranking)

## International work experience

You may be eligible to work in Canada upon obtaining your Canadian degree from 8 months to 3 years (conditions apply)



# Ensure you meet the minimum program requirements before you apply

- a. **Academic standing:** a cumulative grade point average of 3.00 on a 4.00 scale or equivalent (80%) on all transfer subjects, calculated from the most recent 30 credit units completed at your university, including pre-requisites as determined by the University of Calgary.
- b. **Minimum English language proficiency requirements:** a TOEFL score of at least 86 (iBT), IELTS score of 6.5 or an equivalent score for other accepted tests. If you don't meet these requirements, check out our English program (ACC) for pathway.
- c. **Review your tuition and fees as you are responsible for all costs including:** tuition, travel, room and board, student fees, health, etc.



# How to apply

1. Please consult with your home university and view program information at [ucalgary.ca/uci/collaborative-programs](http://ucalgary.ca/uci/collaborative-programs).
2. **Inform your home university you want to apply.** They will nominate prospective candidates. Only nominated candidates may apply.
3. **Apply online.** Once nominated, your home university will provide you with a link to the online application. Submit the application and pay the application fee by March 1, 2020.
4. **Submit your supporting documents by March 15, 2020.** Ensure you forward official transcripts. If your transcripts are not in English you must send a certified English translation along with the original document. You may also need to provide proof of language proficiency (if applicable).



**Don't forget to apply for residence by May 1, 2020!**

## October 1

Undergraduate application is open

## March 1

Deadline to apply online

## March 15

Deadline to submit transcripts and documents

## May 1

Deadline to apply for residence

# International Student Services and Residences

After receiving admission to the university, you will find support services and customized advising at International Student Services (ISS). They will also help you adjust to studying at UCalgary and living in Canada. Reach out to them at **[international.advice@ucalgary.ca](mailto:international.advice@ucalgary.ca)** or visit **[ucalgary.ca/iss](http://ucalgary.ca/iss)** to learn more.

Living in residence instantly connects you to your campus community and your new life as a UCalgary student. Just steps from your classroom, you'll find your fully-furnished room that includes Wi-Fi, all utilities, and access to student tutoring services. Explore all your options at **[ucalgary.ca/ancillary/residence](http://ucalgary.ca/ancillary/residence)**.



# UCalgary's 2+2 and 3+2 programs

## Science

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### 2+2

- Geology
- Geophysics
- Astrophysics
- Physics
- Actuarial Science
- Computer Science
- Mathematics
- Biological Sciences
- Plant Biology
- Chemistry

### 3+2

- Geology
- Geophysics
- Mathematics
- Statistics

## Engineering

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### 3+2

- Civil Engineering
- Oil and Gas
- Geomatics  
Engineering





# 2+2 and 3+2 programs offered by faculty



# Faculty of Science

**34 research chairs,**  
**\$53 million sponsored research funding in 2016-17.**

The Faculty of Science offers innovative programs, hands-on research opportunities, access to world-class laboratories and stimulating environments to spark your curiosity.

We want you to have a world-class experience. Each day, our instruction teams will teach, mentor, and inspire you to reach your full potential. You'll have countless opportunities to explore the world, whether in a lab, a field or up a mountain and get hands-on experience in your chosen field.

**The benefits you'll enjoy:** learning from outstanding faculty members, many of whom are world leaders in their fields, and getting inspired by the discovery and development of new technologies happening within our faculty.

“I was a girl who never dared to speak in front of a crowd. My supervisor asked me to present at GeoConvention and this has helped me to become more confident and step forward when an opportunity arises. I'm now in another country, embracing a different culture, meeting new people, learning great things and expanding my world view thanks to this program.”

— Shuyu Z., Geology, 3+2 student from China University of Petroleum (East China)

Learn more: [ucalgary.ca/science](http://ucalgary.ca/science)

# Programs

## 2+2 and 3+2 **Geology**

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**What you will learn:** Geologists study the history, composition, and physical aspects of our planet. Much of your learning will occur in class, during tutorials and in laboratories. You may also gain hands-on experience conducting research at field schools within both Canada and the United States.

**Career opportunities:** Global career opportunities in oil and gas, engineering firms, the research sector and more.

**Sample courses you may take\*:** Physical Hydrogeology, Siliciclastic Sedimentology, Contaminant Hydrogeology, Advanced Mineralogy, Ore Deposits, Structural Geology, Global Tectonics, Sequence Stratigraphy, Petroleum Geology and Basin Analysis.

## 2+2 and 3+2 **Geophysics**

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**What you will learn:** Geophysics is the application of the laws and techniques of physics to uncover knowledge about the earth's dynamic processes and subsurface structure. Much of your learning will occur while actively working on problems in class, during tutorials, and in the laboratory.

**Career opportunities:** Global career opportunities in environmental assessment, consulting, oil and gas and more.

**Sample courses you may take\*:** Mining Geophysics, Time Series Analysis and 1D Data Processing, Gravity and Magnetism, Seismic Theory and Methods, Multidimensional Data Analysis and Processing.

## 2+2 **Astrophysics**

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**What you will learn:** you will study the fundamental questions about the universe and all of the objects in it — planets, stars, interstellar dust, and galaxies to name a few! You develop the experimental, observational, mathematical, computational and logical skills to uncover the mysteries of the universe.

**Career opportunities:** Global career opportunities in medical physics, geophysics, nuclear energy and more.

**Sample courses you may take\*:** Planetary Astrophysics, Interstellar Medium, High Energy Astrophysics and Cosmology, Stellar Structure and Evolution.

## 2+2 **Physics**

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**What you will learn:** A physics major develops the experimental, observational, mathematical, computational and logistical skills to analyze and solve complex problems. Analyze physical situations and data, construct research problems, perform mathematical computations, and use experimental techniques and equipment.

**Career opportunities:** Global career opportunities in aerodynamics, technological design, medical physics and more.

**Sample courses you may take\*:** Solid State Physics, Plasma Physics, Electromagnetic Theory, Optics and Quantum Mechanics.

\* Courses offered vary between the 2+2 and 3+2 program options and also from year to year.



## 2+2 Biological Sciences

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**What you will learn:** From biomolecules to the biosphere, the biological sciences consider life in all forms. As the most broadly based biological sciences program, this degree will provide you with a marketable set of transferrable skills upon graduation. Much of your learning will occur while working on problems in class, during tutorials, and in the laboratory.

**Career opportunities:** Career opportunities in environmental management and conservation, scientific research, biotechnology, agriculture, forestry and more.

**Sample courses you may take\*:** Principles and Mechanism of Pharmacology, Cellular Mechanisms of Disease, Ecology of Populations, Principles of Aquaculture, Animal Physiology and Principles in Parasitism.

## 2+2 Plant Biology

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**What you will learn:** Plant Biology is a challenging, dynamic, and investigative branch of biology. Much of your learning will occur while actively working on problems in class, during tutorials, and in the laboratory. This degree will provide you with an essential foundation in the physiology, anatomy, morphology, molecular biology, biochemistry, and development of plants.

**Career opportunities:** Global career opportunities in plant biotechnology, agriculture, forestry, the pharmaceutical industry and more.

**Sample courses you may take\*:** Plant Biotechnology, Plant Physiology, Taxonomy of Seed Plants, Plant Cell and Developmental Biology, Medicinal Plant Biochemistry and Conservation Biology.

## 2+2 Chemistry

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**What you will learn:** As a central science, chemistry is closely connected with biology, math and physics. You'll gain experimental skills and a solid theoretical background. You will also develop valuable professional skills and the ability to independently design and conduct your own scientific research.

**Career opportunities:** Global career opportunities in the development of fuels, plastics, drugs, foods, new materials and other consumer products.

**Sample courses you may take\*:** Industrial Chemistry, Advanced Organic Chemistry, Introduction to Atmospheric Chemistry, Advanced Instrumental Analysis and Physical Chemistry of Interfaces.

\*Courses offered vary between the 2+2 and 3+2 program options and also from year to year.



## 2+2 Actuarial Science

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**What you will learn:** Actuarial Science is concerned with the construction of models and solutions for financial, business, and societal problems involving uncertain future events. By exploring the complicated world of financial risk, this degree will equip you with the fundamental and practical tools to assess and forecast risk to make sound financial decisions.

**Career opportunities:** Global career opportunities in the insurance industry, employee benefits and pensions, management consulting and more.

**Sample courses you may take\*:** Actuarial Models, Quantitative Financial Risk Management, Mathematics of Demography and Life Contingencies.

## 2+2 and 3+2 Mathematics

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**What you will learn:** Mathematics and statistics are universal languages that can help answer all kinds of questions. How is financial risk calculated? How reliable is an image transmitted by a deep space probe? You will develop your critical thinking skills to appreciate and address these questions, or explore the rich complexities of the form and knowledge of mathematics itself.

**Career opportunities:** Global career opportunities in financial investments, computer animation and much more.

**Sample courses you may take\*:** Complex Analysis, Algebraic Topology, Numerical Analysis, Computational Finance and Applied Multivariate Analysis.

## 3+2 Statistics

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**What you will learn:** Statistics is the science of collecting, organizing, and interpreting numerical facts. The program focuses on the understanding of statistical reasoning and the application of statistics to real-world situations. Statisticians assist in the gathering information about the world around us and interpret that information in meaningful ways.

**Career opportunities:** Computer analyst, biomedical researcher, statistician, or even a cryptographer.

**Sample courses you may take\*:** Mathematical Statistics, Linear Models and Their Applications, Biostatistics and Stochastic Processes.

## 2+2 Computer Science

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**What you will learn:** Computer Science allows you to combine creativity with skills in communication, mathematics, and logic. This degree will provide you with the skills to quickly adjust to the rapidly changing computer culture over the course of your career without needing continual retraining.

**Career opportunities:** Career opportunities in the public, non-profit and business areas.

**Sample courses you may take\*:** Human-Computer Interaction, Database Management, Design and Analysis of Algorithms, Quantum Computation, Network Systems Security, Image Analysis and Computer Vision, Emergent Computing, Games Programming and Introduction to Cryptography.



\*Courses offered vary between the 2+2 and 3+2 program options and also from year to year.

# Schulich School of Engineering

**165 faculty members** and **30 research chairs,**  
**\$30 million research funding annually.**

A hub of entrepreneurship, innovation and engineering excellence, we are among the top engineering schools in Canada.

Collaborate with some of the leading engineering educators and researchers in the world. We support engineers as future leaders, we embrace diversity and equity in all its forms, and we understand the people, issues and systems they hope to help. Become a Schulich Engineer and find out how you can change the world.

**The benefits you'll enjoy:** a rich learning experience in Canada's engineering capital, world-class professors and researchers, 100,000+ sq. ft. (9,200+ sq. m.) of cutting edge labs and learning spaces, close ties to industry.

“I recommend the University of Calgary because it is a well-regarded university with good rankings, modern facilities and solid research and funding opportunities. The professors are always willing to help and I can really learn a lot here. I like Calgary, Canadian people are very nice and I feel safe here.”

— Heli G., 3+2 Engineering student from Xi'an Jiaotong University

Learn more: [schulich.ucalgary.ca](https://schulich.ucalgary.ca)

# Programs

## 3+2 Civil Engineering

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**What you will learn:** In 2014, the QS World University Rankings named the Schulich School of Engineering among the top 100 civil engineering programs in the world and among the top 5 in Canada. From designing structures, helping remove contaminants from soil and optimizing transportation systems, to investigating biomedical applications through spine research, our graduates are prepared for a diverse range of meaningful careers.

**Career opportunities:** Civil engineer in public and private sectors, consulting industry, management or scientist.

**Sample courses you may take\*:** Structural Engineering, Geotechnical Engineering, Bituminous Materials, Theory of Transport Demand Modelling, Biological Processes for Wastewater Treatment, Group Design Project and more.

## 3+2 Oil and Gas

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**What you will learn:** The Schulich School of Engineering is internationally recognized for educational and research excellence in chemical and petroleum engineering. Oil and gas engineering involves the production of oil and gas in an economical and environmentally safe manner. Learn from global experts with industry partners and strong international research collaborations. Position yourself as a leader in today's competitive job market.

**Career opportunities:** Process Engineer, Petroleum Reservoir Engineer, Petroleum Production Engineer, Environmental Engineer, software development and/or documentation for chemical process/petroleum reservoir simulation software, chemical sales.

**Sample courses you may take\*:** Applied Reservoir Engineering, Subsurface Production Operations, Reservoir Analysis and Description, Enhanced Oil Recovery, Economic Analysis of Petroleum Systems, Engineering Tools, Sustainability, Innovation and Entrepreneurship and Introduction to Project Management.

\*Courses offered vary between the 2+2 and 3+2 program options and also from year to year.





### 3+2 Geomatics Engineering

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**What you will learn:** Schulich School of Engineering’s geomatics-engineering program is celebrating its 40th anniversary. Our internationally respected faculty will help you develop skills in digital imaging systems; geodesy, remote sensing and Earth observation; positioning, navigation and wireless location; and GIScience and land tenure.

**Career opportunities:** Geomatics engineering is a growing profession, offering the perfect indoor/outdoor balance. Spatial location is critical to industries ranging from telecommunications, transportation, farming and utilities to unmanned navigation, aerospace, and oil and gas.

**Sample courses you may take\*:** Advanced GNSS Theory and Receiver Design, Earth Observation for the Environment, Geospatial Vision and 3D Visualization, Spatial Databases and Data Mining, Inertial Surveying and INS/GPS Integration, Land Tenure and Cadastral Systems, and Advanced Topics in Sensor Web and IoT.

\*Courses offered vary from year to year.



# Contact us

Program details:

[ucalgary.ca/uci/collaborative-programs](https://ucalgary.ca/uci/collaborative-programs)

To apply:

Contact your university's international office first. If eligible, they will provide you with the web link to apply

Talk to us:

Our WeChat ID is UCalgary2500 and we look forward to hearing from you

Admissions:

[international.admissions@ucalgary.ca](mailto:international.admissions@ucalgary.ca), +1.403.220.3822

Student services:

[ucalgary.ca/iss](https://ucalgary.ca/iss)



Scan the QR code to add me on WeChat



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